ELSEVIER

Volume 346, 1 June 1999

thin solid films

Contents

Invited Review

Phase separation on solid surfaces: nucleation, coarsening and coalescence kinetics
M. Zinke-Allmang 1

Letter

Yellow green electroluminescnece generated from the thin films of β-diketone-zinc complex
K. Okada, Y.-F. Wang, T.-M. Chen, T. Nakaya 69

Synthesis and Characterization

In situ IR and spectroscopic ellipsometric analysis of growth process and structural properties of $Ti_{1-x}Nb_xO_2$ thin films by metal–organic chemical vapor deposition
Y. Gao 73

Ion beam assisted deposition of diamond-like nanocomposite films in an acetylene atmosphere
X.-Z. Ding, F.-M. Zhang, X.-H. Liu, P.W. Wang, W.G. Durrer, W.Y. Cheung, S.P. Wong, I.H. Wilson. 82

Nanocarbons formed in a hot isostatic pressure apparatus
V.D. Blank, E.V. Polyakov, B.A. Kulnitskiy, A.A. Nuzhdin, Y.L. Alshevskiy, U. Bangert, A.J. Harvey, H.J. Davock . . 86

Comparative study of the structural properties of nanocrystalline Ge:H plasma deposited onto the cathode and the anode using high hydrogen dilutions
P.R. Poulsen, M. Wang, J. Xu, W. Li, K. Chen, G. Wang, D. Feng. 91

Formation of cubic C_3N_4 thin films by plasma enhanced chemical vapor deposition
Z. Zhang, H. Guo, G. Zhong, F. Yu, Q. Xiong, X. Fan 96

Iridium film growth with iridium tris-acetylacetonate: oxygen and substrate effects
Y.-M. Sun, J.P. Endle, K. Smith, S. Whaley, R. Mahaffy, J.G. Ekerdt, J.M. White, R.L. Hance. 100

Influence of non-perovskite phases on ferroelectric and dielectric behavior of electron-beam deposited PZT thin films
S.R. Darvish, A.C. Rastogi, P.K. Bhatnagar 108

Neutron reflectivity investigation of the effects of harsh environments on Ta_2N thin films
T. Rieker, P. Hubbard, J. Majewski, G. Smith, N. Moody 116

Nucleation and growth of diamond on silicon substrate coated with polymer
C. Jingsheng, W. Xuejun, Z. Zhihao, Y. Fengyuan. 120

Intermetallic phase formation and shear strength of a Au–In microjoint
F.S. Shieu, C.F. Chen, J.G. Sheen, Z.C. Chang 125

Diamond-like carbon films with extremely low stress
S. Kumar , D. Sarangi, P.N. Dixit, O.S. Panwar, R. Bhattacharyya 130

Cobalt oxide films grown by a dipping sol-gel process
E. Barrera, T. Viveros, A. Avila, P. Quintana, M. Morales, N. Batina 138

Surfaces, Interfaces and Colloidal Behaviour

A spectroscopic study of hemicyanine dyes in anionic micellar solutions
S.S. Shah, G.M. Laghari, K. Naeem 145

Metallurgical, Protective and Hard Layers

Corrosion behaviour of Al/Ti coating elaborated by cathodic arc PVD process onto mild steel substrate
J. Creus, H. Idrissi, H. Mazille, F. Sanchette, P. Jacquot 150

Effects of substrate temperature on the properties of tetrahedral amorphous carbon films
B.K. Tay, X. Shi, E.J. Liu, H.S. Tan, L.K. Cheah 155

Mechanics and Nanomechanics of Thin Layers

The tribological characteristics of diamond-like carbon films at elevated temperatures
H. Liu, A. Tanaka, K. Umeda 162

Electronics, Optics and Opto-electronics

The stacking faults and their strain effect at the Si/SiO_2 interfaces of a directly bonded SOI (silicon on insulator)
D.-W. Shin, D.-J. Choi, G.-H. Kim 169

Electrical properties of AlN thin films deposited at low temperature on Si(100)
C.L. Aardahl, J.W. RogersJr, H.K. Yun, Y. Ono, D.J. Tweet, S.-T. Hsu 174

Direct formation of Ag–diaminoanthraquinone (DAAQ) complex salts by sequential evaporation.
M. Jamali, J.C. Bernède, R. Le Ny 181

Effects of BF_2^+ implantation on the oxidation resistance of copper films
Z.-C. Wu, Y.-L. Liu, M.-C. Chen 186

Influence of an internal electric field in a sample on the photoemission phenomenon
J. Olesik 191

Adhesion enhancement of optical coatings on plastic substrate via ion treatment
F. Sarto, M. Alvisi, E. Melissano, A. Rizzo, S. Scaglione, L. Vasanelli 196

The effect of rapid thermal annealing on properties of plasma enhanced CVD silicon oxide films
C. Domínguez, J.A. Rodríguez, F.J. Muñoz, N. Zine 202

Room temperature oxidation of $Cu/Si_{0.76}Ge_{0.24}$ annealed at 200 to 300°C
J.-S. Luo, W.-T. Lin, C.Y. Chang, P.S. Shih 207

Optical and electrical properties of $BaTiO_3$ thin films prepared by chemical solution deposition
R. Thomas, D.C. Dube, M.N. Kamalasanan, S. Chandra 212

Features of metal–insulator–semiconductor diodes with tunnel insulator subjected to UV soaking
S.S. Kilchitskaya, T.S. Kilchitskaya, G.D. Popova, V.A. Skryshevsky 226

Influence of annealing on the surface topography of MgF_2: an atomic force microscopic study
Y.-H. Ye, N. Gu, H.-Q. Zhang, P.-P. Chen, X.-L. Tan 230

Langmuir–Blodgett, Biological and Related Films

The structural changes of MoS_2 nanoparticle LB film during rubbing process
Q. Xue, P. Zhang, Z. Zhang, W. Liu, Z. Du, G. Ma 234

Self-Immobilization of reactive molecules and nanoparticles in two-dimensional organic networks
V.V. Arslanov, L.S. Sheinina, R.A. Bulgakova 238

Thin Film Devices, Sensors and Actuators

The growth of $CoSi_2$ using a Co/Zr bilayer on different Si substrates
D. Kim, H. Jeon 244

Technology of integrable free-standing yttria-stabilized zirconia membranes
P. Bruschi, A. Diligenti, A. Nannini, M. Piotto 251

P-I-N diodes on high deposition rate thick a-Si:H layers from pure SiH_4
M. Estrada, I. Pereyra 255

Improved thin film solar cell with Rayleigh scattering in porous silicon pipes
V.A. Skryshevsky, A. Laugier 261

Humidity-sensing properties of nanocrystalline haematite thin films prepared by sol-gel processing
P. Chauhan, S. Annapoorni, S.K. Trikha 266

Condensed Matter Film Behaviour

Analysis of AC electrical response for radio-frequency sputtered $(Ba_{0.5}Sr_{0.5})TiO_3$ thin film
Y.-P. Wang, T.-Y. Tseng 269

The effect of nitrogen doping on the structure of cluster or microcrystalline silicon embedded in thin SiO_2 films
T. Ehara, S. Machida 275

Research on the thermal expansion behavior of anodic films on aluminium
J. Zhou, J. Wu, Y. Yang 280

Structural and optical characterisation of Nd doped $YAlO_3$ films deposited on sapphire substrate by pulsed laser deposition
J. Lančok, M. Jelínek, C. Grivas, F. Flory, E. Lebrasseur, C. Garapon 284

Experimental and modeling study of the sputtered particle transport in an r.f. magnetron discharge
F. Clénet, Ph. Briaud, G. Lempérière, G. Turban 290

Sputter-deposited Mo and reactively sputter-deposited Mo-N films as barrier layers against Cu diffusion
J.-C. Chuang, S.-L. Tu, M.-C. Chen 299

Author Index for Volume 346 307

Subject Index for Volume 346 309

For more information on *Thin Solid Films*, please visit our website at:
http://www.elsevier.nl/locate/tsf

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the Publisher upon request.